CLAIMS

What is claimed is:

1. A machine-implemented method, comprising:

    establishing, within a global operating system environment provided by an operating system, a first partition which serves to isolate processes running within the first partition from other partitions within the global operating system environment;

    associating a first partition share value with the first partition, wherein the first partition share value indicates what portion of computing resources provided by a processor set has been allocated to the first partition;

    associating a first process group share value with a first group of one or more processes executing within the first partition, wherein the first process group share value indicates what portion of the computing resources allocated to the first partition has been allocated to the first group of one or more processes; and

    scheduling a set of work from one of the processes in the first group of one or more processes for execution on the processor set, wherein the set of work is scheduled in accordance with a priority determined based, at least partially, upon the first partition share value and the first process group share value.

2. The method of Claim 1, wherein a global administrator sets the first partition share value.

3. The method of Claim 1, wherein a partition administrator sets the first process group share value.

4.   The method of Claim 1, wherein the processor set comprises one or more processors.

1   5.   The method of Claim 1, wherein scheduling further comprises:

2   determining, based at least partially upon usage history, whether all of the processes

3   in the first group of one or more processes have consumed up to the portion of

4   processing resources indicated by the first process group share value.

1   6.   The method of Claim 5, wherein scheduling further comprises:

2   in response to a determination that all of the processes in the first group of one or

3   more processes have consumed up to the portion of processing resources

4   indicated by the first process group share value, assigning a lower priority to

5   the set of work.

1   7.   The method of Claim 5, wherein scheduling further comprises:

2   determining, based at least partially upon usage history, whether all of the processes

3   in the first partition have consumed up to the portion of processing resources

4   indicated by the first partition share value.

1   8.   The method of Claim 7, wherein scheduling further comprises:

2   in response to a determination that all of the processes in the first partition have

3   consumed up to the portion of processing resources indicated by the first

4   partition share value, assigning a lower priority to the set of work.

1   9.   The method of Claim 7, wherein scheduling further comprises:

2   in response to a determination that all of the processes in the first group of one or

3   more processes have not consumed up to the portion of processing resources

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4   indicated by the first process group share value, and in response to a

5   determination that all of the processes in the first partition have not consumed

6   up to the portion of processing resources indicated by the first partition share

7   value, assigning a higher priority to the set of work.

1   10.   The method of Claim 1, wherein a process with a highest relative priority has its set

2   of work executed on the processor set next.

1   11.   The method of Claim 1, wherein the first partition share value represents a value that

2   is relative to other partition share values sharing the computing resources.

1   12.   The method of Claim 1, wherein the first partition share value represents a percentage

2   of the computing resources allocated to the partition.

1   13.   The method of Claim 1, wherein the first process group share value represents a value

2   that is relative to other process group share values within the first partition sharing the

3   computing resources.

1   14.   The method of Claim 1, wherein the first process group share value represents a

2   percentage of the partition's allocated computing resources that are allocated to the first

3   group of one or more processes.

1   15.   A machine-readable medium, comprising:

2   instructions for causing one or more processors to establish, within a global operating

3   system environment provided by an operating system, a first partition which

4   serves to isolate processes running within the first partition from other

5   partitions within the global operating system environment;

6   instructions for causing one or more processors to associate a first partition share

7   value with the first partition, wherein the first partition share value indicates

8   what portion of computing resources provided by a processor set has been

9   allocated to the first partition;

10   instructions for causing one or more processors to associate a first process group

11   share value with a first group of one or more processes executing within the

12   first partition, wherein the first process group share value indicates what

13   portion of the computing resources allocated to the first partition has been

14   allocated to the first group of one or more processes; and

15   instructions for causing one or more processors to schedule a set of work from one of

16   the processes in the first group of one or more processes for execution on the

17   processor set, wherein the set of work is scheduled in accordance with a

18   priority determined based, at least partially, upon the first partition share value

19   and the first process group share value.

1   16.   The machine-readable medium of Claim 15, wherein a global administrator sets the

2   first partition share value.

1   17.   The machine-readable medium of Claim 15, wherein a partition administrator sets the

2   first process group share value.

1   18.   The machine-readable medium of Claim 15, wherein the processor set comprises one

2   or more processors.

1   19.   The machine-readable medium of Claim 15, wherein the instructions for causing one

2   or more processors to schedule comprises:

3   instructions for causing one or more processors to determine, based at least partially

4   upon usage history, whether all of the processes in the first group of one or

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5   more processes have consumed up to the portion of processing resources

6   indicated by the first process group share value.

1   20.   The machine-readable medium of Claim 19, wherein the instructions for causing one

2   or more processors to schedule further comprises:

3   instructions for causing one or more processors to assign, in response to a

4   determination that all of the processes in the first group of one or more

5   processes have consumed up to the portion of processing resources indicated

6   by the first process group share value, a lower priority to the set of work.

1   21.   The machine-readable medium of Claim 19, wherein the instructions for causing one

2   or more processors to schedule further comprises:

3   instructions for causing one or more processors to determine, based at least partially

4   upon usage history, whether all of the processes in the first partition have

5   consumed up to the portion of processing resources indicated by the first

6   partition share value.

1   22.   The machine-readable medium of Claim 21, wherein the instructions for causing one

2   or more processors to schedule further comprises:

3   instructions for causing one or more processors to assign, in response to a

4   determination that all of the processes in the first partition have consumed up

5   to the portion of processing resources indicated by the first partition share

6   value, a lower priority to the set of work.

1   23.   The machine-readable medium of Claim 21, wherein the instructions for causing one

2   or more processors to schedule further comprises:

3   instructions for causing one or more processors to assign, in response to a

4   determination that all of the processes in the first group of one or more

5   processes have not consumed up to the portion of processing resources

6   indicated by the first process group share value, and in response to a

7   determination that all of the processes in the first partition have not consumed

8   up to the portion of processing resources indicated by the first partition share

9   value, a higher priority to the set of work.

1   24.   The machine-readable medium of Claim 15, wherein a process with a highest relative

2   priority has its set of work executed on the processor set next.

1   25.   The machine-readable medium of Claim 15, wherein the first partition share value

2   represents a value that is relative to other partition share values sharing the computing

3   resources.

1   26.   The machine-readable medium of Claim 15, wherein the first partition share value

2   represents a percentage of the computing resources allocated to the partition.

1   27.   The machine-readable medium of Claim 15, wherein the first process group share

2   value represents a value that is relative to other process group share values within the first

3   partition sharing the computing resources.

1   28.   The machine-readable medium of Claim 15, wherein the first process group share

2   value represents a percentage of the partition's allocated computing resources that are

3   allocated to the first group of one or more processes.

1   29.   An apparatus, comprising:

2   a mechanism for establishing, within a global operating system environment provided

3   by an operating system, a first partition which serves to isolate processes

4   running within the first partition from other partitions within the global

5   operating system environment;

6   a mechanism for associating a first partition share value with the first partition,

7   wherein the first partition share value indicates what portion of computing

8   resources provided by a processor set has been allocated to the first partition;

9   a mechanism for associating a first process group share value with a first group of one

10   or more processes executing within the first partition, wherein the first process

11   group share value indicates what portion of the computing resources allocated

12   to the first partition has been allocated to the first group of one or more

13   processes; and

14   a mechanism for scheduling a set of work from one of the processes in the first group

15   of one or more processes for execution on the processor set, wherein the set of

16   work is scheduled in accordance with a priority determined based, at least

17   partially, upon the first partition share value and the first process group share

18   value.

1   30.   The apparatus of Claim 29, wherein a global administrator sets the first partition share

2   value.

1   31.   The apparatus of Claim 29, wherein a partition administrator sets the first group share

2   value.

1   32.   The apparatus of Claim 29, wherein the processor set comprises one or more

2   processors.

1   33.   The apparatus of Claim 29, wherein the mechanism for scheduling further comprises:

2   a mechanism for determining, based at least partially upon usage history, whether all

3   of the processes in the first group of one or more processes have consumed up

4   to the portion of processing resources indicated by the first process group

5   share value.

1   34.   The apparatus of Claim 33, wherein the mechanism for scheduling further comprises:

2   a mechanism for assigning, in response to a determination that all of the processes in

3   the first group of one or more processes have consumed up to the portion of

4   processing resources indicated by the first process group share value, a lower

5   priority to the set of work.

1   35.   The apparatus of Claim 33, wherein the mechanism for scheduling further comprises:

2   a mechanism for determining, based at least partially upon usage history, whether all

3   of the processes in the first partition have consumed up to the portion of

4   processing resources indicated by the first partition share value.

1   36.   The apparatus of Claim 35, wherein the mechanism for scheduling further comprises:

2   a mechanism for assigning, in response to a determination that all of the processes in

3   the first partition have consumed up to the portion of processing resources

4   indicated by the first partition share value, a lower priority to the set of work.

1   37.   The apparatus of Claim 35, wherein the mechanism for scheduling further comprises:

2   a mechanism for assigning, in response to a determination that all of the processes in

3   the first group of one or more processes have not consumed up to the portion

4   of processing resources indicated by the first process group share value, and in

5   response to a determination that all of the processes in the first partition have

6   not consumed up to the portion of processing resources indicated by the first

7   partition share value, a higher priority to the set of work.

1   38.   The apparatus of Claim 29, wherein a process with a highest relative priority has its
2   set of work executed on the processor set next.

1   39.   The apparatus of Claim 29, wherein the first partition share value represents a value
2   that is relative to other partition share values sharing the computing resources.

1   40.   The apparatus of Claim 29, wherein the first partition share value represents a
2   percentage of the computing resources allocated to the partition.

1   41.   The apparatus of Claim 29, wherein the first process group share value represents a
2   value that is relative to other process group share values within the first partition sharing the
3   computing resources.

1   42.   The apparatus of Claim 29, wherein the first process group share value represents a
2   percentage of the partition's allocated computing resources that are allocated to the first
3   group of one or more processes.